

Response

Applicant: Jason D. Hanzlik et al.

Serial No.: 10/730,698

Filed: December 8, 2003

Docket No.: 10395US01

Title: TAPE REEL ASSEMBLY WITH WEAR RESISTANT DRIVEN TEETH

REMARKS

The following remarks are made in response to the Non-Final Office Action mailed May 18, 2007. In that Office Action, claims 1, 5-6, 10, 14-15, 17, 23, and 25-29 were rejected under 35 U.S.C. § 103(a) as unpatentable over Morita et al., U.S. Patent Publication No. 2002/0158161 ("Morita"). In addition, dependent claims 2, 7-9, 11, 16, 18, and 24 were rejected under 35 U.S.C. § 103(a) as unpatentable over Morita and further in view of Boutni, U.S. Patent No. 4,749,738 ("Boutni").

Claims 1-2, 5-11, 14-18, and 23-29 remain pending in the application and are presented for consideration and allowance.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 1, 5-6, 10, 14-15, 17, 23, and 25-29 were rejected under 35 U.S.C. § 103(a) as unpatentable over Morita, and dependent claims 2, 7-9, 11, 16, 18, and 24 were rejected under 35 U.S.C. § 103(a) as unpatentable over Morita, and further in view of Boutni.

Patent Office policy is to follow *Graham v. John Deere Co.* in the consideration and determination of obviousness under 35 U.S.C. § 103. *MPEP § 2141*. The four *Graham* factual inquiries that provide the basis for an obviousness determination include:

1. Determining the scope and content of the prior art;
2. Ascertaining the differences between the prior art and the claims at issue;
3. Resolving the level of ordinary skill in the pertinent art; and
4. Evaluating evidence of secondary considerations.

The Manual of Patent Examining Procedure at section 2141 provides basic tenants of patent law that must be adhered to, including a) The claimed invention must be considered as a whole; b) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; and c) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention.

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A. A *prima facie* case of obviousness cannot be established under the *Graham* factual inquiries.

The Office Action mailed May 18, 2007 concedes at page 2 that Morita does not disclose a hub having driven teeth formed of a polymer including a lubricating additive. The Office Action concludes at page 2 that since Morita discloses forming the separate components of a restraining member 4 and a releasing member 6 of a polymer including a lubricating additive that it would have been obvious to one of ordinary skill in the art to form gear teeth 24 on hub 2 from a polymer including a lubricating additive. We respectfully disagree.

We believe a *prima facie* case of obviousness cannot be established based on Morita under the tenets of *Graham*. The scope and content of Morita is provided, in part, in paragraph 0001 where it is disclosed that the invention relates to the structure of reel-rotation restraining means for restraining a tape reel when not in use. With reference to Figures 12 and 13, Morita provides restraining member 4 and releasing member 6 that move down (co-axially) to restrain tape reel 2 and move up to disengage from tape reel 2. These elements are commonly referred to in the art as a brake assembly. Note, for example, that the instant application also provides a brake assembly at 24 in Figure 1. The pending claimed invention is different from Morita since the scope and content of Morita is directed to teeth on a brake assembly (the reel-rotation restraining means 10 in Morita that includes restraining member 4 and the releasing member 6), while the scope and content of the instant application is directed to teeth integrally formed on a tape reel hub.

In further ascertaining the differences between the claimed invention and Morita under *Graham*, Morita provides in paragraph 0119 that **either** the restraining member 4 **or** the releasing member 6 may be formed with a synthetic resin containing a lubricant. Morita also discloses in paragraph 0119 that this combination of lubricating **either** the restraining member 4 **or** the releasing member 6 reduces the friction and wear between the sliding-contact portions of **both**, and because of a reduction in the driving resistance the reel 2 can be stably rotated.

All pending claims require a hub defining a tape winding surface and driven teeth integrally formed by the hub, where the driven teeth are formed from a polymer including a

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lubricating additive. Thus, under *Graham* a stark difference exists between Morita and the claims at issue. The Morita disclosure is voluminous and includes 59 figures, and yet Morita is completely silent as regards a lubricating additive in reel gear 24. Consequently, the pending claims cannot be rendered obvious by Morita since Morita fails to teach, or in any manner suggest, a lubricating additive in the teeth reel gear 24 of tape reel 2.

B. The explicit disclosure in Morita teaches away from providing reel gear 24 with a lubricating additive.

Morita discloses that either the restraining member 4 or the releasing member 6 includes a lubricating additive. Morita discloses at paragraph 0119 that the addition of a lubricant to one of restraining member 4 or releasing member 6 reduces the sliding and wear between the sliding contact portions of **both** members. This is undoubtedly because if these components of the brake assembly stick together the tape reel 2 will not be able to rotate. See Morita at paragraphs 0017, 0119, and 0121 for a discussion of the importance of ensuring that restraining member 4 disengage from releasing member 6.

Morita discloses in paragraph 0121 that a driving gear of the 13 of a tape drive meshes with reel gear 24 of tape reel 2 and moves and holds the tape reel 2 slightly upward. Driving gear 13 must mesh with reel gear 24 to turn the tape reel 2. However, based on Morita, if one were to provide reel gear 24 with a lubricating additive, the contact portions of **both** the reel gear 24 and the driving gear 13 would slip. Slippage between the driving gear 13 and the reel gear 24 is highly undesirable in the art.

The explicit disclosure in Morita discloses reducing the sliding friction between the sliding contact portions of both members 4 and 6. Morita discloses that driving gear 13 and reel gear 24 engage and mesh. Morita does not disclose, teach, or suggest any lubricating additive to reel gear 24, for the likely reason that this would result in a reduction in friction between driving gear 13 and reel gear 24. Thus, one of skill in the art would not be motivated to place a lubricating additive in reel gear 24 since the explicit disclosure of Morita teaches that this addition leads to sliding between the contact member.

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The divergent teaching of Morita cannot be ignored, as this is an essential part of determining the scope and content of the prior art as required by the *Graham* factual inquiries. *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983). A *prima facie* case of obviousness cannot be established based on Morita when Morita is considered in its entirety, i.e., as a whole, including portions that lead away from the claimed invention. *W. L. Gore & Associates, Inc.*; MPEP § 2141.20.

C. A *prima facie* case of obviousness cannot be established because the rejections rely upon impermissible hindsight reasoning.

All pending claims require a hub defining a tape winding surface and driven teeth integrally formed by the hub, where the driven teeth are formed from a polymer including a lubricating additive. This patentable difference is described and claimed only in applicants' disclosure. Morita is completely silent regarding the addition of a lubricating additive to the reel gears 24. Morita provides a lubricating additive for brake assembly components that slide relative to one another.

It would not be an obvious modification to one of skill in the art to enable the reel gear 24 to slide relative to the driving gear 13. Only the Applicants' disclosure provides a hub defining a tape winding surface and driven teeth integrally formed by the hub, where the driven teeth are formed from a polymer including a lubricating additive, and only through impermissible hindsight reasoning is the Office able to arrive at its stated conclusion at page 2 of the Office Action. The Supreme Court in the KSR decision warned against this very form of hindsight reasoning by stating: "A fact finder should be aware, of course, of the **distortion** caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." *KSR Int'l Co. v. Teleflex, Inc. et al.*, 550 U.S. ____ (2007) Slip Opinion, pg. 17, last paragraph, emphasis added, (citing to *Graham*, 38 U.S. 1, 36 in warning against a temptation to read into the prior art the teachings of the invention at issue and instructing courts to guard against the use of hindsight reasoning).

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Based on all of the above, Morita provides no basis or reason for providing a lubricant to reel gear 24. In fact, Morita is entirely silent as to providing a lubricating additive for reel gear 24 in the entire 18 columns of disclosure and fifty-nine figures. It is respectfully submitted that a *prima facie* case of obviousness cannot be established when Morita is read as a whole and viewed without the benefit of impermissible hindsight bias afforded by the instant application.

Thus, it is believed that claims 1, 5-6, 10, 14-15, 17, 23, and 25-29 are not rendered obvious over Morita. It is respectfully requested that the rejections to claims 1, 5-6, 10, 14-15, 17, 23, and 25-29 under 35 U.S.C. § 103(a) as unpatentable over Morita be withdrawn.

The dependent claims 2, 7-9, 11, 16, 18, and 24 were rejected under 35 U.S.C. § 103(a) as unpatentable over Morita in view of Boutni. Boutni is cited as disclosing a polycarbonate compound, a 20% glass fiber compound, and a 5% PTFE additive. The Office Action concludes at page 3 that it would have been obvious to one of ordinary skill in the art at the time of the invention to form the hub and reel gear 24 of Morita with the compositions disclosed by Boutni.

Without acquiescing to the merits of the purported combination of Morita in view of Boutni, Applicants respectfully note that even if Morita is modified by Boutni, the resulting device would necessarily require forming restraining member 4 and releasing member 6 from the polymers provided by Boutni. Thus, the purported combination would in no manner provide reel gear 24 with a lubricating additive, as required by each of the pending claims.

It is further noted that Boutni provides at column 4, lines 8-15 that the preparation of the polycarbonates includes interfacial polymerization processing. None of the cited references provide a polymer blend including a lubricating additive. Specifically, all of the compositions in Morita and Boutni are believed to be compounds and not polymer blends. Based on this, at least claim 26 as originally filed recites additional patentably distinct subject matter.

CONCLUSION

Applicants respectfully submit that pending claims 1-2, 5-11, 14-18, and 23-29 recite patentable subject matter, are in form for allowance, and are not taught or suggested by the cited references.

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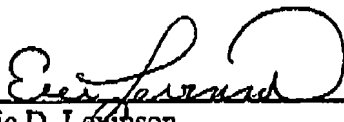
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No fees are required under the Rules for the addition of claims. However, if other fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 09-0069.

The Examiner is invited to telephone the Applicants' representative at the below-listed number to facilitate prosecution of this application.

Respectfully submitted,

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